Clause	Topic	Expert(s)	Editor's query	Expert response
Interactions				
5.2.1	M4 content protocols	Iraj, Thomas	Points 2 and 7: If we aren't bothering with a means of describing at reference point M1 the (downlink) content distribution protocols and (uplink) content contribution protocols available at M4, I can delete the highlighted words. • Please confirm.	[Thomas] Fine to remove for now. We may add something in a future release. [Iraj] May need to discover M4 content protocols via M1 in order to provide Serivce Access Information via M8.
5.2.1	RTC provisioning	Imed, Ryan	Point 7: pCR needed to add some introductory descriptive text about provisioning RTC services at reference point M1.	[?] Should be TS 26.113. (Suitable text drafted in S4-240259-> S4-240368.)
~~5.2.4.*~~	~~Server Certificate handling~~	~~Thorsten~~	~~I have ported clarifications on server certificate handling from Thorsten's TS 26.512 CR0060 to track the baseline of that specification to save you the trouble.~~ ~~• Please check.~~	
~~5.2.4.1~~	~~5GMS over MBMS~~	~~Thomas~~	~~Aspects relating to 5GMS over MBMS are retained in TS 26.512.~~ ~~• I didn't think it appropriate to include in this generic toolbox specification.~~ ~~• Let me know if you disagree.~~	~~[Thomas] I agree, stays in TS 26.512 for now. This may be reconsidered later, there are cases to do RTC over Multicast for group calls and so on, but this would require completely new design considerations.~~
~~5.2.4.2, 5.2.4.4~~	~~Server Certificate utilisation~~	~~Thorsten, (Iraj)~~	~~Aspects relating to utilisation of provisioned server certificates are moved to clause 5.2.8.2 (Content Hosting) and 5.2.9.2 (Content Publishing) respectively.~~	~~[Thorsten] Looks good, specifically the text movement to Content Hosting & Publishing.~~
5.2.4.3	Usage of Server Certificates at M4 by RTC	Imed/Ryan	pCR needed to add some context about use of provisioned server certificates in relation to RTC.	Imed still considering.
~~5.2.7.1~~	~~Policy Template description~~	~~Thorsten~~	~~Moved some descriptive text here.~~	~~[Thorsten] I think, this looks good.~~
~~5.2.7.1~~	~~Policy Template parameters description~~	~~Richard~~	~~TODO Rework parameter names based on proposed data type refactoring of *M1QoSSpecification* in clause 7.3.3.3.~~	
~~5.2.7.1~~	~~Dynamic Policy instantiation parameters~~	~~Thorsten~~	~~Check: The maximum uplink/downlink bit rates are determined by 5G System configuration, and hence are read-only properties of the Policy Template populated by the Media AF.~~	~~[Thorsten] Confirm that these are set by the 5G System and should therefore be returned by the Media AF at M1.~~
5.2.7.1	~~Dynamic Policy instantiation parameters~~	~~Thorsten~~	~~CHECK: Does the Media Application determine the maximum authorised bit rate?~~	~~Yes.~~
5.3.3.1	Dynamic Policy life-cycle	Richard	TODO: Add some text and/or a figure describing the life-cycle of a Dynamic Policy.	
5.3.3.1	MQTT notifications	Imed/Ryan	Question about where the endpoint of the proposed generic MQTT channel is advertised at reference point M5.	

5.3.3.1	Application-based Service Data Flow filtering	Thorsten	Is the paragraph about using Application Identifiers as alternative traffic filtering parameters still relevant? • For context, recall that the aspId and appId are inherent properties of the parent Provisioning Session. • These were removed from PolicyTemplate.applicationSessionContext but, having found this paragraph, I am now doubting whether that was entirely the correct course of action. • My proposal is to express application-based filtering as a third method in *ServiceDataFlowDescription* by adding an extra value *APPLICATION* to the *SdfMethod* enumeration. • No additional parameters would be needed for an application-based Service Data Flow description since the Media AF already knows the ASP identifier and Application Identifier from the parent Provisioning Session.	[Thorsten] hmm, Imed was pushing for the PFDs. I still think, that PFDs is an alternative. I dont think, that an "application identifier" (referencing PFDs) is the same as an "appid". Specifically, the Domain Name (7.3.3.2) is only applicable to PFDs.
~~5.3.3.2~~	~~Dynamic Policy instantiation parameters~~	~~Richard~~	~~TODO Rework parameter names based on proposed data type refactoring of *M5QoSSpecification* in clause 7.3.3.4.~~	
5.3.3.2	QoS enforcement	Thorsten	Point 5: • Redundant *enforcementMethod* property removed from Dynamic Policy. • *enforcementBitRate* property replaced by simple Boolean indicating that the QoS is being enforced (see clause 9.3.3.1). • If this property of a Dynamic Policy is set once and for all when it is instantiated, and can't change during the lifetime of the Dynamic Policy, could it be moved into an *OperationSucccess* response message body (clause 7.3.3.7)?	
~~5.3.5, 5.3.6~~	~~CMCD-based metrics reporting~~	~~Thomas~~	~~Possible Rel-19 5GMS Phase 3 Key Issue studying the feasibility of using in-band CTA Wave CMCD at reference point M4 for indirect reporting of metrics and/or consumption to the Media AF via the Media AS (i.e. by the Media AS invoking the consumption reporting API on the Media AF at reference point M3)?~~	~~[Thomas] Couple of options: (1) CMCD metrics over existing frameworks (Metrics, EVEX). (2) CMCD inband and then exposed through AF. Suggest to study in Rel-19.~~
~~5.4.2~~	~~Media delivery session life-cycle~~	~~Richard~~	~~Richard to draft a pCR.~~	
~~5.6.2~~	~~Bit rate recommendation client notification~~	~~Imed, Paul, Thomas~~	~~pCR needed to specify M11 bit rate recommendation notification from the Media Session Handler to the Media Access Function. • Relevant for both AF-based and ANBR-based Network Assistance methods. See also https://github.com/5G-MAG/Standards/issues/45~~	~~Cross-reference to (currently empty) new clause 10.3.1.1 added.~~
~~5.6.2~~	~~Delivery boost client API~~	~~Imed, Paul, Thomas~~	~~pCR needed to specify M11 delivery boost request from the Media Session Handler to the Media Access Function. • Relevant for both AF-based and ANBR-based Network Assistance methods. See also https://github.com/5G-MAG/Standards/issues/45~~	~~Cross-reference to (currently empty) clause 10.3.1.2 added.~~
Common data types				

6	3GPP Service URL	Thomas	pCR needed to specify generic aspects of 3GPP Service URL. (Specific aspects for 5GMS Service URL belong in TS 26.512 Rel-18.)	
Common aspects of network APIs				
~~7.1.1~~	~~HTTP version support at M1/M5~~	~~Iraj, Spencer, Thorsen, Thomas~~	~~Are we happy to specify which versions of HTTP need to be implemented by all kinds of Media AF at reference points M1 and M5 centrally here in TS 26.510 rather than in TS 26.512 and TS 26.114?~~	~~[Thomas] Yes, please.~~
7.1.4.4		Richard	Clarification needed in TS 26.512 as well.	
7.3.3.1	*IpPacketFilterSet* shared data type	Thorsten	Views on proposed data type refactoring of *IpPacketFilterSet* , please.	[Thorsten]: Tos is 8bit, DSCP just 6bit. when we only have a DSCP, it is not possible to address the ECN bits. Using Uint instead of String is good.
7.3.3.2	*ServiceDataFlowDescription* shared data type	Thorsten	Views on proposed addition of *sdfMethod* property to *ServiceDataFlowDescription* , please.	[Thorsten] Good.
7.3.3.3	*M1QoSSpecification* shared data type	Thorsten	Views on proposed data type refactoring of *M1QoSSpecification* , please.	[Thorsten]. Looks good, Imed may have a comment.
7.3.3.4	*M5QoSSpecification* shared data type	Thorsten	Views on proposed data type refactoring of *M5QoSSpecification* , please.	[Thorsten]. Looks good, Imed may have a comment.
~~7.3.3.4~~	~~*M5QoSSpecification* shared data type~~	~~Thorsten~~	~~Units for *desiredPacketLatency* are underspecified.~~	~~[Thorsten] I think in Milliseconds. It is a float data type in TS 29.514.~~
~~7.3.3.4~~	~~*M5QoSSpecification* shared data type~~	~~Thorsten~~	~~Units for *desiredPacketLossRate* are underspecified.~~	~~[Thorsten] maybe the exponent. It is a percent value TS 29.514, encoded as a float.~~
~~7.3.3.4~~	~~*M5QoSSpecification shared data type*~~	~~Thorsten~~	~~Why are packet latency and packed loss directionless?~~	~~[Thorsten] MediaComponents object at N5 allows different bit rates for uplink/downlink directions, but the packet loss and latency parameters cover both directions.~~
7.3.3.7	*OperationSuccessResponse* shared data type	Richard	TODO Move *OperationSuccessResponse* data type to top of clause 7.3.3 and renumber.	
7.3.3.7	*OperationSuccessResponse* shared data type	Richard	TODO Enforce specified cardinality in YAML, if possible.	
7.3.3.10	UnidirectionalQoSSpecification shared data type	Richard	TODO Unify with M5QoSSpecification for event exposure, if possible.	
7.3.4.3	*ProvisioningSessionType* enumeration	Imed/Ryan	pCR needed to add new Provisioning Session type for RTC?	Included in S4-240368.
***Maf_Provisioning* service (M1 APIs)**				
8.2.3.1	*ProvisioningSession* resource	Imed/Ryan	pCR needed to add applicability of properties to RTC in last column of table 8.2.3.1-1.	Add to Imed's RTC pCR.
8.3.3.2	*ContentProtocolDescription*	Imed/Ryan	Assume nothing extra needed here or in TS 26.114 for since content ingest/egest at M2 is out of scope for RTC. (This entire API is probably out of scope for RTC for Rel-18, at least, so won't be referenced from TS 26.114.)	

8.6.3.1	*EdgeResourcesConfiguration* resource	Imed	Reference to non-existent activationTrigger property! • Not present in either *EdgeResourcesConfiguration* or *EdgeProcessingEligibilityCriteria* . • Should this instead refer to *EdgeProcessingEligibilityCriteria.appRequest* being false? • Affects TS 26.512 Rel-17 too!	
~~8.8.3.1~~	~~*ContentHostingConfiguration* resource~~	~~Iraj~~	~~Note that ingestConfiguration.pull is converted into an enumerated type *ContentTransferMode* :~~ ~~• This can be reflected as *egestConfiguration.mode* in the Content Publishing Provisioning API.~~	~~[Iraj] OK. PCR to 127.~~
~~8.9~~	~~*ContentPublishingConfiguration* resource~~	~~Iraj~~	~~pCR needed.~~	~~[Iraj] OK. PCR to 127.~~
~~8.10.3.1~~	*MetricsReportingConfiguration* resource	Gunnar, Charles	Slight semantic change: omitting scheme from a metrics reporting configuration now means that reporting is disabled.	
~~8.10.3.1~~	~~*MetricsReportingConfiguration* resource~~	~~Thorsten, Prakash~~	~~Why can we specify the DNN to be used to send metrics reports, but provide no equivalent for any of the other M5 API invocations?~~ ~~• Should the dataNetworkName property be replicated when provisioning other 5GMS features like consumption reporting?~~ ~~• Should S-NSSAI also be included in this configuration?~~	~~[Prakash] I too am not sure what motivated us to include this information in the data model. There is no description about how to use this.~~ ~~[Richard] Fine to study in Rel-19. For simplicity's sake, it's tempting to just remove the DNN from the metrics reporting provisioning in Rel-18. (I don't know what motivated this in the first place.)~~
8.10.3.1	*MetricsReportingConfiguration* resource	Imed/Ryan	Does the *MetricsReportingConfiguration.urlFilters* array work for RTC or does TS 26.114 need to profile it out?	
8.12.3.1	*EventDataProcessingConfiguration* resourc	Richard	TODO Move statement about *DataAccessProfile.parameters* controlled vocabulary not being specified to TS 26.532?	
***Maf_SessionHandling* service (M3/M5 APIs)**				
~~9.1~~	~~Overview~~	~~Richard~~	~~pCR needed to change *{provisioningSessionId}* to *{exteranlServiceId}* :~~	
9.2.3.1	*ServiceAccessInformation* resource	Imed/Ryan	pCR needed to add applicability of properties to RTC in last column of table 9.2.3.1-1.	Add to Imed's RTC pCR.
9.2.3.1	*ServiceAccessInformation* resource	Imed/Ryan	pCR needed to add RTC configuration to Service Access Information as the equivalent of *streamingAccess* for 5G Media Streaming.	Now included in Imed's RTC pCR S4-240368.
9.3.3.1	*DynamicPolicy* resource	Thorsten	When multiple Service Data Flow descriptions are provided when a Media Session Handler instantiates a dynamic policy, should they be treated as logical OR or logical AND by the Media AF and PCF?	[Thorsten] The UPF will apply an "AND". However, for the application is will be an "OR"
9.3.3.1	*DynamicPolicy* resource	Thorsten	Views on proposed simplification of QoS enforcement parameters down to a simple Boolean indication. • See above for possible further simplification as an *OperationSucccess* response message body.	[Thorsten] When QoSEnforcement is true, which bitrate is used as threshold? Is traffic limiting really a QOS?

9.4.3.1	*NetworkAssistanceSession* resource	Thorsten	(Similar to above.) When multiple Service Data Flow descriptions are provided by the Media Session Handler when it creates a Network Assistance Session, should they be treated as logical OR or logical AND by the Media AF and PCF?	[Thorsten]: The network will do an "AND", i.e. look at the combined taffic.
UE media session handling APIs (M6/M11)				
10.2	Service launch mechanism	Thomas	Do we need an explicit media session handling start/stop API separate from the 3GPP Service URL specified in clause 6?	[Thomas] Need more time.
10.2.1	~~3GPP Service URL for 5GMS~~	~~Thomas~~	~~The 3GPP Service URL for 5GMS should be specified in TS 26.512 Rel-18.~~	~~[Thomas] Need more time.~~ ~~Editor deleted clause from draft.~~
10.2.2	~~3GPP Service URL for RTC~~	~~Thomas, Imed/Ryan~~	~~The 3GPP Service URL for RTC (if any) should be specified in TS 26.114 Rel-18.~~	~~[Thomas] Need more time.~~ ~~Editor deleted clause from draft.~~
10.3	Client API for downlink media delivery	Thomas	Do you still plan to port the media session handling functional model from TS 26.512 clause 12.2.1 to TS 26.501?	[Thomas] Need more time.
~~10.x~~	~~Client API for downlink media delivery~~	~~Thomas~~	~~Could this clause be made more generic by a pCR so that it is applicable to uplink media streaming and maybe even RTC too?~~ ~~• If so, we don't need clauses 10.4 and 10.5.~~	~~[Thomas] Need more time.~~
10.3	Client API for Background Data Transfer	Imed	pCR needed to specify method for Media-aware Application to request a Background Data Transfer.	
10.4	Client API for bit rate recommendation	Thomas, Paul	pCR neeed to specify client notification for bit rate recommendation (same for AF-based and ANBR-based).	[Thomas] Need more time.
10.4	Client API for delivery boost	Thomas, Paul	pCR neeed to specify method for Media-aware Application to request a delivery boost (same for AF-based and ANBR-based).	[Thomas] Need more time.
Existing APIs				
~~11~~			~~(Removed completely.)~~	
~~11.2~~	~~Usage of 5G Core services~~		~~(Moved to clause 5.5.)~~	
~~11.3~~	~~Usage of modem APIs~~		~~(Moved to clause 5.6.)~~	
Annexes				
~~A~~	~~OpenAPI definitions~~		~~Pointing to 3GPP Forge for OpenAPI definitions.~~	
~~B.1~~	~~Geolocator controlled vocabulary~~		~~New annex definining controlled vocabulary of media delivery geolocator types.~~	